

1 CLAIMS

2 What is claimed is:

3 1. A method of generating a structured document, said method  
4 comprising:

5 generating an edit interface in response to a selection of a structured  
6 document template from a plurality of structured document templates;

7 displaying said edit interface and a plurality of document elements  
8 associated with said edit interface;

9 modifying said edit interface by dragging and dropping a selected  
10 document element of said plurality of document elements; and

11 generating an output structured document from said edit interface in  
12 response to a generation command.

13

14 2. The method according to claim 1, wherein said method of generating a  
15 structured document further comprises:

16 providing a template selection user interface including a dialog box, a  
17 folder, and a pull down menu, wherein said template selection user interface is  
18 configured to select said one structured document template from said plurality of  
19 structured document templates.

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1           **3.**     The method according to claim 1, wherein said step of providing a  
2     template selection user interface further comprising:

3                     providing a plurality of existing output structured documents by said  
4     template selection user interface; and

5                     selecting an existing output structured document from said plurality of  
6     existing output structured documents.

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8           **4.**     The method according to claim 3, wherein said step of generating said  
9     edit interface further comprises:

10                    generating said edit interface from a selected existing output structured  
11     document, wherein said edit interface includes user-input data previously stored with  
12     said existing output structured document.

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14           **5.**     The method according to claim 1, wherein each of said plurality of  
15     structured document templates includes a document type definition.

1           **6.**     The method according to claim 5, wherein said step of generating an  
2 edit interface further comprising:  
3                     utilizing a corresponding document type definition for said selected  
4 structured document template to generate a memory model;  
5                     parsing said memory model for a plurality of required document  
6 elements;  
7                     generating said edit interface including said plurality of required  
8 document elements, each said document element requiring an input of information;  
9 and  
10                    outputting said generated edit interface to a user interface editor.

11  
12           **7.**     The method according to claim 6, wherein said step of generating said  
13 edit interface further comprises:  
14                    embedding said corresponding document type definition of said  
15 selected one structured document template within said edit interface.

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17           **8.**     The method according to claim 7, wherein said step of modifying said  
18 edit interface further comprises:  
19                    receiving user-input modification data;  
20                    determining a compliance of said user-input modification data with  
21 said memory model; and  
22                    modifying said edit interface with said user-input modification data in  
23 response to said compliance of said user-input modification data.

1           **9.**       The method according to claim 8, further comprising:

2                   receiving user-input document element information for said plurality of  
3   required document elements and said selection of one or more optional document  
4   elements;

5                   determining receipt of user-input document element information for  
6   each of said plurality of required document elements and said each selected optional  
7   document element in response to receiving a user generation request; and

8                   generating an output structured document memory model utilizing said  
9   user-input document element information for each of said plurality of required  
10   document elements and for each said selected optional document element.

11  
12           **10.**     The method according to claim 9, wherein said step of generating said  
13   output structured document further comprising:

14                   determining compliance of said generated output structured document  
15   memory model with said memory model; and

16                   generating said output structured document in response to said  
17   generated output structured document memory model in compliance with said  
18   document type definition memory model.

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1           **11.**     The method according to claim 10, further comprises:

2                     outputting said output structured document, said outputting including  
3     one of printing said output structured document, storing said output structured  
4     document to a local directory, storing said output structured document to a remote  
5     directory, and storing said output structured document to a document management  
6     service.

7  
8           **12.**     A document authoring system comprising:

9                     an edit interface generator configured to generate an edit interface in  
10    response to receiving a structured document template;

11                    a user interface editor configured to modify said edit interface by  
12    dragging and dropping a selected document element from a plurality of document  
13    elements and to modify said edit interface by entering user-input modification data,  
14    wherein said user interface editor is further configured to generate a modified edit  
15    interface in response to completion of selection of said plurality of document elements  
16    and said user-input modification data; and

17                    an output structured document generator configured to receive said  
18    modified edit interface, said output structured document generator being further  
19    configured to generate a structured document based on said modified edit interface,  
20    and to output said structured document, wherein said output includes one of printing  
21    said structured document, storing said structured document to a local directory, a  
22    remote directory, and storing said structured document to a document management  
23    service.

1           **13.**   The document authoring system according to claim 12, further  
2 comprising:

3                   a plurality of structured document templates, wherein each of said  
4 plurality of structured document templates includes a document type definition; and

5                   a template selection user interface configured to provide said  
6 structured document template used to generate said edit interface from said plurality  
7 of structured document templates.

8  
9           **14.**   The document authoring system according to claim 13, further  
10 comprising:

11                   a parser configured to extract said document type definition from said  
12 structured document template, wherein said edit interface generator is further  
13 configured to generate a document type definition memory model from said extracted  
14 document type definition.

15  
16           **15.**   The document authoring system according to claim 14, wherein said  
17 parser is configured to identify a plurality of required document elements from said  
18 document type definition memory model, said edit interface generator is further  
19 configured to generate said edit interface from both said identified plurality of  
20 required document elements and said extracted document type definition.

1           **16.**   The document authoring system according to claim 15, further  
2 comprising:

3                   a graphical user interface configured to receive said user-input  
4 modification data, said user interface editor is further configured to modify said edit  
5 interface based on said user-input modification data.

6  
7           **17.**   The document authoring system according to claim 16, wherein said  
8 user-input modification data including one of user-input document element  
9 information for said plurality of required document elements, a selection of one or  
10 more optional documents included in said document type definition memory model,  
11 and user-input document element information for said selection of one or more  
12 optional documents.

1           **18.**    A program storage device or signals readable by a computer, tangibly  
2    embodying instructions executable by said computer to perform a method for  
3    enabling a user to generate a structured document capable of being printed, stored to a  
4    local directory, stored to a remote directory, and stored to a document management  
5    service, said generation comprising:

6                   generating an edit interface in response to a selection of a structured  
7    document template from a plurality of structured document templates;

8                   displaying said edit interface and a plurality of document elements  
9    associated with said edit interface;

10                  modifying said edit interface by dragging and dropping a selected  
11   document element of said plurality of document elements; and

12                  generating an output structured document from said edit interface in  
13   response to a generation command.

15           **19.**    A method for generating an edit interface, said method comprising:

16                   generating a document type definition memory model based on  
17   document elements parsed from a corresponding document type definition;

18                   generating an edit interface memory model based on said document  
19   type definition memory model;

20                   embedding said document type definition within said edit interface  
21   memory model, wherein an output structured document generated from said user  
22   interface memory model is configured to be edited; and

23                   outputting an edit interface based on said edit interface memory model.



1           **20.**   A method for generating an edit user interface, said method  
2 comprising:  
3                   parsing a document type definition memory model for a plurality of  
4 required document elements, a plurality of optional elements, and a plurality of  
5 element tags;  
6                   displaying said plurality of required document elements, each required  
7 document element being displayed in a corresponding document element dialog box  
8 in said edit interface;  
9                   displaying said plurality of optional document elements, each optional  
10 document element being displayed as a corresponding document element icon in said  
11 edit interface; and  
12                   displaying said plurality of element tags, each element tag being  
13 displayed as a corresponding element tag icon in said edit interface.  
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